WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2 **Control No.:** 2014-107

Waste Site Code(s)/Subsite Code(s): 300-294, Garnet Sand East of 350 Building

Reclassification Category: Interim ☐ Final ☒

Reclassification Status: Closed Out ☐ No Action ☒ Rejected ☐

RCRA Postclosure ☐ Consolidated ☐ None ☐

Approvals Needed: DOE ☒ Ecology ☐ EPA ☒

Description of current waste site condition:

The 300-294, Garnet Sand East of 350 Building waste site, part of the 300-FF-2 Operable Unit, was identified as a waste site requiring remediation in the *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington* (300 Area Final ROD), U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2013). The 300-294 waste site was previously included as a "plug-in" site in the Tri-Party Agreement Administrative Record *Fact Sheet: 300 Area "Plug-In" Waste Sites for Fiscal Year 2011,* U.S. Department of Energy, Richland Operations Office, Richland, Washington (DOE-RL 2011), in accordance with the *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington* (300-FF-2 ROD), U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2001) and the *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2009).

The 300-294 waste site consists of garnet sand on a gravel roadbed and adjacent field approximately 5 m (16.4 ft) east of the location of the 350 Building. Evidence of garnet sand was found within a 60- by 24-m (197- by 78.7-ft) area of gravel and field. Support facilities at the 350 complex included the 350-A Building that housed spray painting and sandblasting operations.

The 300-294 waste site was recommended for remove, treat, and dispose (DOE-RL 2011); however, no characterization samples were collected at that time. A subsequent in-process composite sample collected of garnet sand and soil and analyzed for metals, including mercury, indicates that contamination above cleanup levels (CULs) does not exist at the site; therefore, no action is required.

Basis for reclassification:

The in-process sample results support a reclassification of this site to Final No Action. The garnet sand left in place at the 300-294 waste site does not pose a risk to human health or the environment.

Additional information is provided in the *Supporting Information for Reclassification of the 300-294, Garnet Sand East of 350 Building Waste Site* (attached).

WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2 **Control No.:** 2014-107

Waste Site Code(s)/Subsite Code(s): 300-294, Garnet Sand East of 350 Building

Regulator comments:

Waste Site Controls:

Engineered Controls: ☐ Yes ☒ No Institutional Controls: ☐ Yes ☒ No O&M Requirements: ☐ Yes ☒ No

If any of the Waste Site Controls are checked Yes, specify control requirements including reference to the Record of Decision, TSD Closure Letter, or other relevant documents:

M. S. French		11/30/14
DOE Federal Project Director (printed)	Signature	Date
N/A		
Ecology Project Manager (printed)	Signature	Date
B. Simes		1/6/2015
EPA Project Manager (printed)	Signature	Date

SUPPORTING INFORMATION FOR RECLASSIFICATION OF THE 300-294, GARNET SAND EAST OF 350 BUILDING WASTE SITE

Attachment to Waste Site Reclassification Form 2014-107

November 2014

GENERAL SITE INFORMATION AND BACKGROUND

The 300-294, Garnet Sand East of 350 Building waste site was identified as a waste site requiring remediation in the *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington* (300 Area Final ROD) (EPA 2013). The 300-294 waste site was previously included as a "plug-in" site in the Tri-Party Agreement Administrative Record *Fact Sheet: 300 Area "Plug-In" Waste Sites for Fiscal Year 2011* (DOE-RL 2011) in accordance with the *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington* (300-FF-2 ROD) (EPA 2001) and the *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision* (EPA 2009).

The 300-294 waste site consists of garnet sand on a gravel roadbed and adjacent field approximately 5 m (16.4 ft) east of the former location of the 350 Building (Figure 1). Evidence of garnet sand was found within a 60- by 24-m (197- by 78.7-ft) gravel and field area (Figure 2). Support facilities at the 350 complex included the 350-A Building that housed spray painting and sandblasting operations. Garnet sand was commonly used in grit-blasting operations to clean rust, paint, or contamination from the surface of metal components. The garnet sand material is not a hazardous substance, but there is potential for contamination from the surface material that was removed by grit blasting. Based on the location of the garnet sand being in close proximity to the 350-A Building, it is likely the garnet sand was used to sandblast painted surfaces.

SAMPLING ACTIVITIES

An in-process composite sample (J1TWJ9) consisting of 30 aliquots of garnet sand and sandy gravel was collected on June 24, 2014. The sample was collected to support a determination that residual contaminant concentrations at this site meet the cleanup levels specified in the 300 Area Final ROD (EPA 2013). A summary of the composite sample collected is provided in Table 1.

The composite sample was submitted for full protocol laboratory analysis and was analyzed using U.S. Environmental Protection Agency (EPA)-approved analytical methods as shown in Table 2.

Contaminants of Concern

The contaminants of concern (COCs) were determined based on the likely use of the garnet sand material. Because garnet sand was commonly used in grit-blasting operations to clean rust and paint from metal components, the COCs were identified as inductively coupled plasma (ICP) metals and mercury.

Figure 1. The 300-294 Waste Site Location Map.

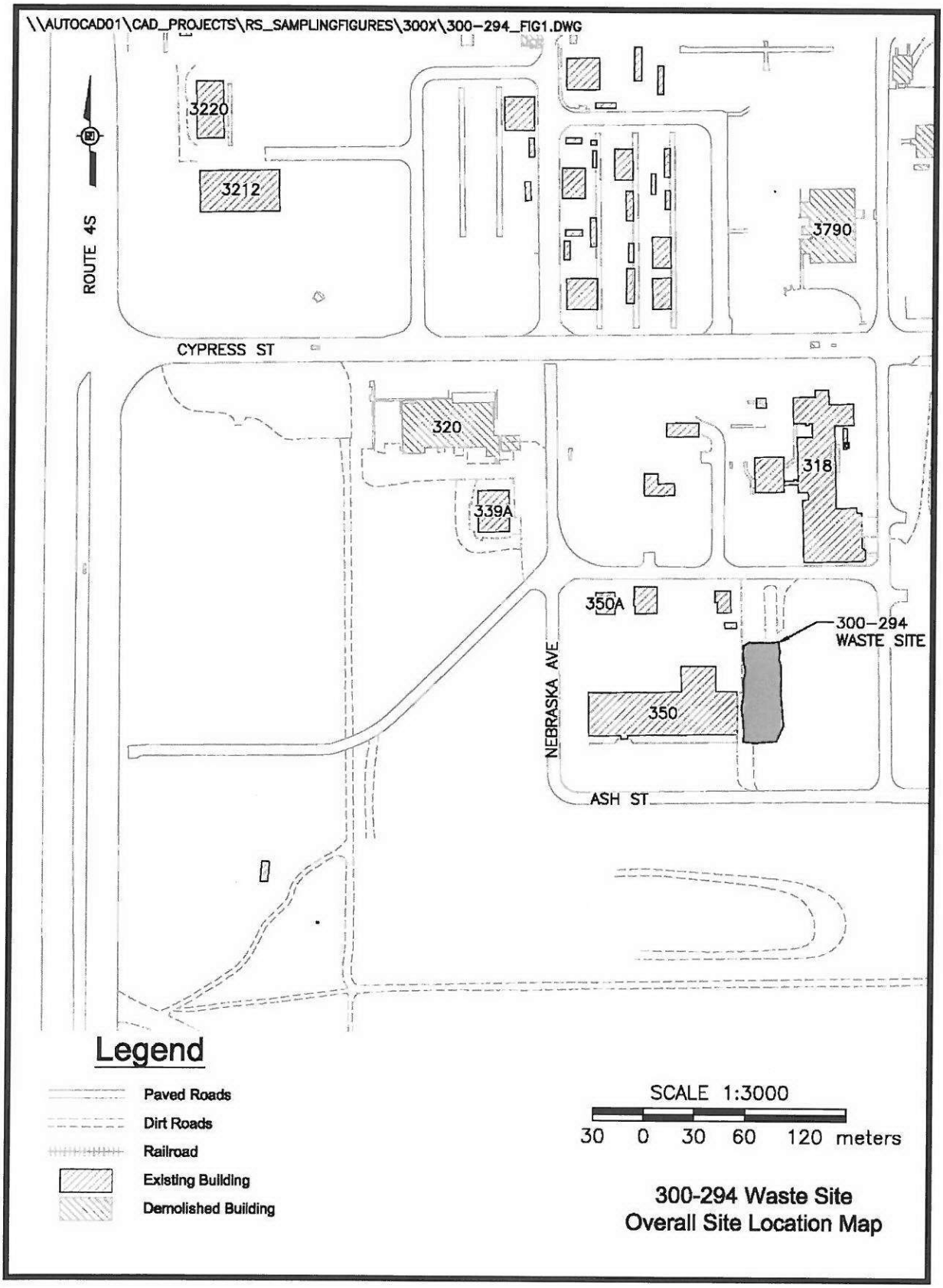

Figure 2. Photograph of the 300-294 Waste Site in January 2010.

Table 1. In-Process Sample Summary for the 300-294 Waste Site.

Sample Location	Sample Type	HEIS Number	Sample Date	Washington State Plane Coordinate Locations (m)	Sample Analysis
300-294	Composite	J1TWJ9	6/24/2014	N 115335 E 593989	ICP metals [a], mercury

Source: Field logbook EL-1663-06 (WCH 2014).

[a] Analysis for the expanded list of ICP metals included aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium (total), cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, tin, uranium, vanadium, zinc, and zirconium in the analytical results package.

HEIS = Hanford Environmental Information System
ICP = inductively coupled plasma

Table 2. 300-294 Waste Site Laboratory Analytical Methods.

Analytical Method	Contaminants of Concern
ICP metals [a] – EPA Method 6010	Metals
Mercury – EPA Method 7471	Mercury

[a] Analysis was performed for the expanded list of ICP metals to include aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium (total), cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, tin, uranium, vanadium, zinc, and zirconium in the analytical results package.

EPA = U.S. Environmental Protection Agency
ICP = inductively coupled plasma

Sample Results

An in-process composite sample collected of garnet sand and soil and analyzed for metals, including mercury, indicates that contamination above cleanup levels (CULs) does not exist at the site; therefore, no action is required. The laboratory-reported in-process sample results for all constituents are stored in a project-specific database prior to archival in the Hanford Environmental Information System and are included in Appendix A.

SUMMARY FOR FINAL NO ACTION DETERMINATION

The in-process sampling results support a reclassification of the 300-294 waste site to Final No Action.

REFERENCES

DOE-RL, 2011, *Fact Sheet: 300 Area "Plug-In" Waste Sites for Fiscal Year 2011*, AR/PIR Accession Number 1109011799, August 2011, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

EPA, 2001, *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2009, *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2013, *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington*, November 2013, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

WAC 173-340, 1996, "Model Toxics Control Act – Cleanup," *Washington Administrative Code*.

WCH, 2014, *D4 Waste Site Miscellaneous Sampling*, Logbook EL-1663-06, pp. 12-14, Washington Closure Hanford, Washington.

APPENDIX A

IN-PROCESS SAMPLE RESULTS

300-294 Metals Data

Site Code	Sample Number	Sample Date	Northing	Easting	Aluminum			Antimony			Arsenic			Barium		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	1170	N	6.64	15.9	BD	6.45	9.77	DU	9.77	18.5	D	1.95

Site Code	Sample Number	Sample Date	Northing	Easting	Beryllium			Boron			Cadmium			Calcium		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	1		0.0977	19.5	DU	19.5	1.95	DU	1.95	716	N	7.81

Site Code	Sample Number	Sample Date	Northing	Easting	Chromium			Cobalt			Copper			Iron		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	89	D	2.93	6.01	BD	2.93	64.2	D	5.86	58600	D	156

Site Code	Sample Number	Sample Date	Northing	Easting	Lead			Lithium			Magnesium			Manganese		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	10.7		0.322	0.896	BD	0.37	521	N	8.3	506	DN	3.91

Site Code	Sample Number	Sample Date	Northing	Easting	Mercury			Molybdenum			Nickel			Potassium		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	0.00374	U	0.00374	20.7	D	3.91	60.1	D	2.93	162	BD	125

Site Code	Sample Number	Sample Date	Northing	Easting	Selenium			Silicon			Silver			Sodium		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	0.305	DU	0.305	1580	N	1.46	1.95	DU	1.95	98.7	C	6.84

Site Code	Sample Number	Sample Date	Northing	Easting	Tin			Uranium			Vanadium			Zinc		
					mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	5.86	DU	5.86	0.186	*D	0.0122	13.1	D	1.95	30.3	DN	7.81

Site Code	Sample Number	Sample Date	Northing	Easting	Zirconium		
					mg/kg	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	2.81	D	0.0924

300-294 TCLP Metals Data

Site Code	Sample Number	Sample Date	Northing	Easting	Arsenic			Barium			Cadmium			Chromium		
					mg/L	Q	PQL	mg/L	Q	PQL	mg/L	Q	PQL	mg/L	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	0.05	NU	0.05	0.14	N	0.01	0.01	NU	0.01	0.01	NU	0.01

Site Code	Sample Number	Sample Date	Northing	Easting	Lead			Mercury			Selenium			Silver		
					mg/L	Q	PQL	mg/L	Q	PQL	mg/L	Q	PQL	mg/L	Q	PQL
300-294	J1TWJ9	06/24/14	115335	593989	0.033	NU	0.033	0.0007	U	0.0007	0.06	NU	0.06	0.01	NU	0.01